

DECLARATION AND POWER OF ATTORNEY

As a below named inventor, I hereby declare that my residence, post office address and citizenship are as stated below next to my name: that I verily believe I am the original, first and sole inventor (if only one name is listed below) or a joint inventor (if plural names are listed below) of the subject matter claimed and for which a patent is sought in the application entitled:

NONAQUEOUS SECONDARY BATTERY

which application is:

☒ the attached application
(for original application)

☐ application Serial No. _____
filed _____, and amended on _____

(for declaration not accompanying application)

that I have reviewed and understand the contents of the specification of the above-identified application, including the claims, as amended by any amendment referred to above; that I acknowledge my duty to disclose information of which I am aware and which is material to the examination of this application under 37 C.F.R. 1.56; and that I hereby claim foreign priority benefits under Title 35, United States Code §119, §172 or §365 of any foreign application(s) for patent or inventor's certificate listed below and have also identified on said list any foreign application for patent or inventor's certificate on this invention having a filing date before that of the application on which priority is claimed:

Pat Application Number	Country	Filing Date	Priority Claimed (yes or no)
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* see attached sheet

I hereby claim the benefit of Title 35, United States Code §120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in a listed prior United States application in the manner provided by the first paragraph of Title 35, United States Code, §112, I acknowledge my duty to disclose any material information under 37 C.F.R. 1.56 which occurred between the filing date of the prior application and the national or PCT international filing date of this application:

Application Serial No.	Filing Date	Status (patented, pending, abandoned)
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I hereby appoint John H. Mion, Reg. No. 18,879; Donald E. Zinn, Reg. No. 19,046; Thomas J. Macpeak, Reg. No. 19,292; Robert J. Seas, Jr., Reg. No. 21,092; Darryl Mexic, Reg. No. 23,063; Robert V. Sloan, Reg. No. 22,775; Pete D. Olexy, Reg. No. 24,513; J. Frank Osha, Reg. No. 24,625; Waddell A. Biggart, Reg. No. 24,861; Robert G. McMorrow, Reg. No. 19,093; Louis Gubinsky, Reg. No. 24,835; Neil B. Siegel, Reg. No. 25,200; David J. Cushing, Reg. No. 28,703; John R. Inge, Reg. No. 26,916; Joseph J. Ruch, Jr., Reg. No. 26,577; Sheldon I. Landsman, Reg. No. 25,430; Richard C. Turner, Reg. No. 29,710; Howard L. Bernstein, Reg. No. 25,665; Alan J. Kasper, Reg. No. 25,426; Kenneth J. Burchfiel, Reg. No. 31,333; Gordon Kit, Reg. No. 30,764; Susan J. Mack, Reg. No. 30,951; Frank L. Bernstein, Reg. No. 31,484; Mark Boland, Reg. No. 32,197; William H. Mandir, Reg. No. 32,156; Scott M. Daniels, Reg. No. 32,562; and Brian W. Hannon, Reg. No. 32,778, my attorneys to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith, and request that all correspondence about the application be addressed to SUGHRUE, MION, ZINN, MACPEAK & SEAS, 2100 Pennsylvania Avenue, N.W., Washington, D.C. 20037.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Date	December 5, 1997	First Inventor	Yukio	--	Miyaki
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P. Application Number	Country	Filing Date	Priority Claimed (yes or No)
Hei. 7-183233	Japan	June 28, 1995	yes
Hei. 7-174861	Japan	July 11, 1995	yes
Hei. 7-189190	Japan	July 25, 1995	yes
Hei. 8-027658	Japan	February 15, 1996	yes

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Date _____

Residence _____

Citizenship _____

Eighth Inventor _____

First Name

Middle Initial

Last Name

Signature _____

Post Office Address _____

(Supply similar information for ninth and subsequent joint inventors.)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of

Yukio MIYAKI, et al.

Appln. No.: 08/981,011

Group Art Unit: 1745

Filed: December 24, 1997

Examiner: Jonathan Crepeau

For: NONAQUEOUS SECONDARY BATTERY

DECLARATION UNDER 37 C.F.R. § 1.132

Commissioner for Patents
Washington, D.C. 20231

Sir:

I, TOSHIAKI AONO, hereby declare and state:

THAT I am a citizen of Japan;

THAT I am a graduate of Nagoya University having received the degree of Master of Science in the course of physical chemistry in 1971;

THAT I have been employed by Fuji Photo Film Co., Ltd., from April of 1971 to date;

THAT I have been engaged in research and development, principally related to the photographic light-sensitive material, the heat-sensitive material and the battery, at Ashigara Laboratory and Fujinomiya Laboratory of Fuji Photo Film Co., Ltd; and

THAT the following sample was prepared and evaluated by me or under my direct supervision as described below and as set forth on pages 71-73 of the present

DECLARATION UNDER 37 C.F.R. § 1.132
U.S. Appl. No. 08/981,011

specification.

Eight-eight weight percent of compound 1-A synthesized in Synthesis Example 1 in the present application as a negative electrode material were mixed with 6 wt % of flaky graphite, and 4 wt% of an aqueous dispersion of polyvinylidene fluoride and 1 wt% of carboxymethyl cellulose as binders and 1 wt% of lithium acetate were added thereto. The mixture was kneaded with water as a medium to prepare a slurry. The slurry was applied to each side of a 18 μm thick copper foil by extrusion coating to obtain a total dry thickness of 90 μm to prepare negative electrode (a).

After drying, negative electrode (a) was compressed by means of a calender press and cut to prescribed width and length to prepare negative sheet electrode (a).

Eighty-seven weight percent of LiCoO_2 as a positive electrode material, 6 wt% of flaky graphite, 3 wt% acetylene black and, as binders, 3 wt % of an aqueous dispersion of polytetrafluoroethylene and 1 wt % of sodium polyacrylate were kneaded with water as a medium to prepare a slurry. The resulting slurry was applied to each side of a 20 μm thick aluminum foil in the same manner as described above to obtain a total dry thickness of 290 μm to prepare positive electrode (a).

Positive electrode (a) was dried, pressed, and cut to obtain positive sheet electrode (a).

Battery AS was prepared by using a combination of negative sheet electrode (a) and positive sheet electrode (a) in the same manner as in Example 1-1 in the present

DECLARATION UNDER 37 C.F.R. § 1.132
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application. Ten samples of battery AS were made. Each battery was charged at 1 mA/cm² to 4.15V and stored at 60°C for 3 weeks. After the 3-week storage, the open circuit voltage was measured. The results are shown below.

TABLE

Battery	Open Circuit Voltage After 3 weeks Storage (V)
AS (Comp.)	0.99

In Battery AS, the open circuit voltage after 3 weeks storage was 0.99 V.

Accordingly, "3.99V", which is set forth in Table 3 on page 74 of the present specification, is a typographical error, and the correct value is "0.99V".

I declare further that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Date: May 17, 2001

Toshiaki Aono
Toshiaki Aono